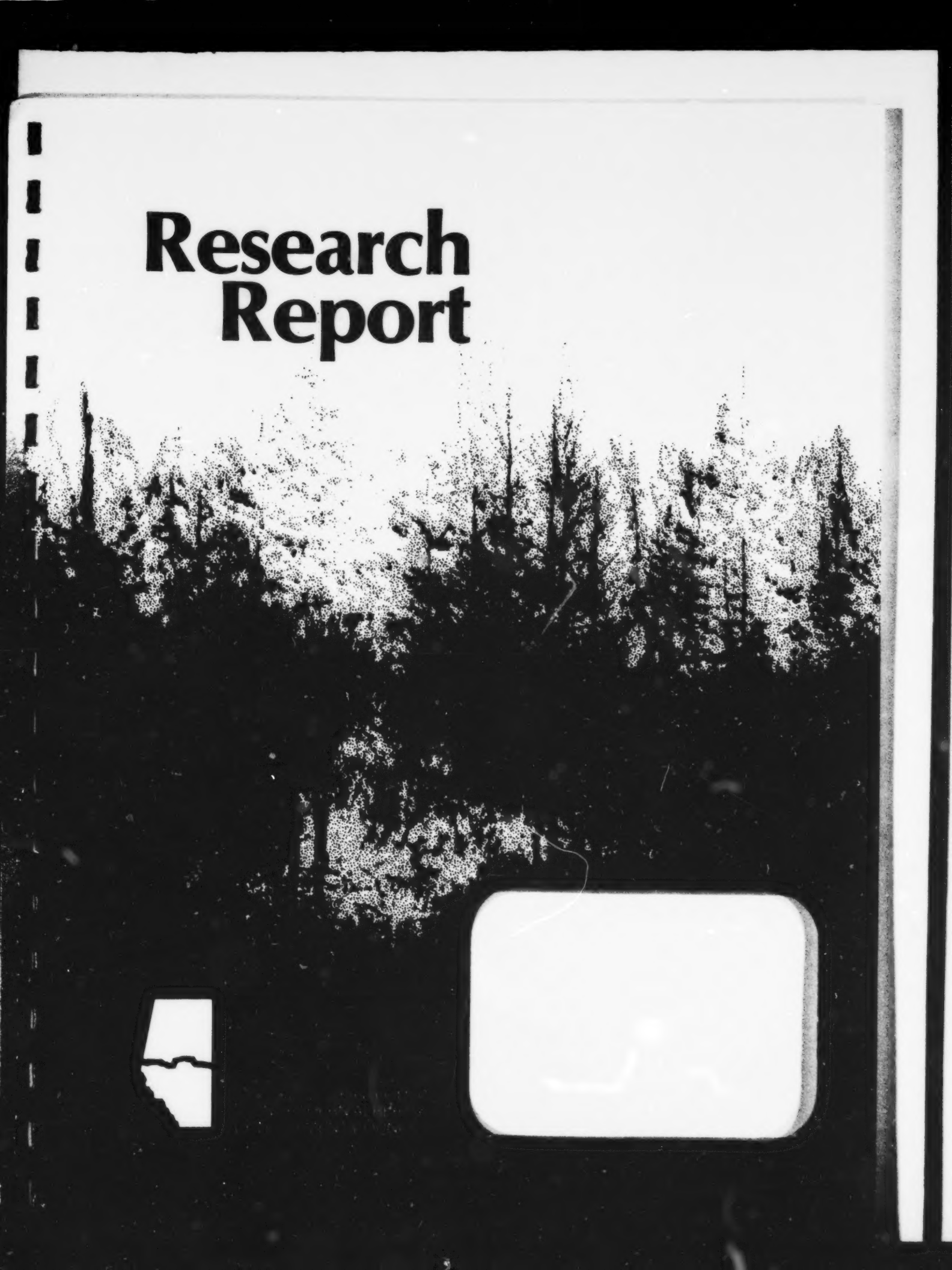
Research Report



GAME RANCHING IN NORTHERN ALBERTA

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In
NORTHERN ALBERTA

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NORTHERN ALBERTA DEVELOPMENT COUNCIL

Overview of Game Ranching In Northern Alberta

1.0 BACKGROUND TO REPORT

The Northern Alberta Development Council was created in 1963 as an Advisory Council to the Provincial Government. Through its revised Act of the Legislature (1973) it is charged with the responsibility to:

"investigate, monitor, evaluate, plan and promote practical measures to foster and advance general development in northern Alberta and to advise the government on matters respecting:

a) social and economic development;
b) development of communities; and
c) development of government services and programs to meet the needs of northern Alberta."

Given the above mandate the NADC over the past 10 years has engaged in a number of activities relating to the economic development of northern Alberta. These initiatives have included support for feasibility research into game ranching as an economic activity in the north and support for project developmental efforts.

The development of game ranching as an Alberta industry is receiving increasing attention, due in part to a number of provincial initiatives. These include a new provincial Fish and Wildlife Policy supporting game ranching on private lands and Metis Settlements, and proposed revisions to the provincial Wildlife Act and Regulations that would enable increased development of game ranching within the Province.

The objectives of this report are to:

1. Provide background information on game ranching.

2. Assess potential economic opportunities related to the development of a game ranching industry in northern Alberta.

3. Examine various issues and concerns relating to game ranching in northern Alberta.

4. Make recommendations from the Northern Alberta Development Council to the Provincial Government regarding the development of game ranching in northern Alberta.

2.0 KIKINO WILDLIFE RANCH

The Kikino Wildlife Ranch is located on the Kikino Metis Settlement, approximately 45 km south of Lac La Biche. Kikino is used in this report as a case study and point of reference from which to examine many of the concepts and ideas being voiced in support of, or against, increased game ranching activity in Alberta.

2.1 HISTORY

In response to a number of briefs and enquiries in the mid 1970's, the Northern Alberta Development Council commissioned a study to determine the feasibility of game ranching in northern Alberta. The study looked specifically at two sites - Paddle Prairie and Kikino Metis Settlements (see Appendix A - Game Ranching Historical Chronology).

Kikino picked up on the support given to the concept of game ranching in the research report, and in 1979 began to develop a game ranch on the Settlement.

Kikino had a number of objectives in developing a game ranch:

- to increase the productivity of marginal lands on the Settlement,
- to ensure that an area on the Settlement would be developed where a source of wild meat for all settlers would be guaranteed, and
- to recreate the opportunity of viewing and interacting with "wild" animals on the Settlement as had been done in the past.

2.2 FIVE YEAR PLAN

Since 1979, Kikino has been gradually developing their game ranch using a variety of Settlement initiatives together with various provincial services, including access to animal stock, agricultural expertise and short-term employment programs. The game ranch has developed under the guidance of the Settlement Council, the Kikino Wildlife Ranching Association and a Game Ranching Advisory Committee. The Advisory Committee consists of representatives from the Metis Development Branch of Municipal Affairs, Alberta Agriculture, the Fish and Wildlife Division of Alberta Energy and Natural Resources and the Settlement Council.

In 1980 the Ranching Association cleared land, fenced a 20 acre holding pen and built corrals. During 1981 the first animals (24 bison) were obtained through Fish and Wildlife from Elk Island National Park. Also, in 1981 the Advisory Committee was formed and further fencing took place. A major fencing effort in 1982 resulted in 11 1/2 sections being completely enclosed, and a number of out-buildings constructed.

In 1983, the Settlement Council used funds available to them through the Municipal Debt Reduction Grant to purchase 21 bison from Alberta Wildlife Park and constructed additional corrals for handling the animals.

During the past year (1984) the Association received another 21 bison from Elk Island. With financial assistance from the Northern Alberta Development Council it was possible to clear and develop a number of additional pasture areas. Eight thousand posts for fence repair and expansion were cut and dried. The Association plans to fence an additional eight sections of land and develop the pasture areas through burning and seeding. Planning for 1985, which will complete the first 5 year plan, includes the completion of remaining fence work and further construction of corral and animal handling facilities.

3.0 GAME RANCHING POLICY AND LEGISLATION

The legislation and policy dealing with game ranches is found in three documents: the Provincial Fish and Wildlife Policy, the Wildlife Act and the Big Game Farm Regulations made under the Wildlife Act. A brief summary of the legislation as it relates to the development of game ranches follows:

3.1 FISH AND WILDLIFE POLICY

In 1982 the Fish and Wildlife Division of the Department of Energy and Natural Resources tabled a revised Provincial Fish and Wildlife Policy. The policy outlined, among other things, the Province's position regarding game ranching.

In Section 23 and 24, the Fish and Wildlife Policy states:

> 23) The Division will encourage an environment which fosters the development of a domestic wildlife farming industry on private land and Metis Settlements through:
>
> a) The provision of a permit for the purpose of transporting and retaining wildlife.
> b) The provision for capturing breeding stock from the wild under the authority of a permit.
> c) The development of criteria for the conditions of captivity and sale of wildlife held under a domestic wildlife farming license.

24) The Division will encourage an environment which fosters the development of a game ranching industry on private land and Metis Settlements through:

a) The provision of a permit for the purpose of transporting and retaining wildlife.
b) The provision for capturing breeding stock from the wild under the authority of a permit.
c) The development of criteria for the conditions of captivity and sale of wildlife managed under a game ranching license.

Previously, Big Game Farm licenses were available only on private lands. The mixing of the terms "farm" and "ranch" can be confusing. Generally the term farm defines an operation developed on a smaller land base involving a more intensive degree of management in contrast to a "ranch" which involves a larger land base and relatively less intensive management practices.

3.2 WILDLIFE ACT

The current Alberta Wildlife Act is the cornerstone of the legislation from which game ranching initiatives have been developed. A number of amendments to the Wildlife Act, currently being discussed, would revise the statute and bring it more in line with initiatives contained in the new Fish and Wildlife Policy. For example, one area being studied for revision is the definition of captive wildlife.

Prior to the proposed revisions, big game farms existed generally as private zoos, with little provision for the legal traffic of game farm stock (Wildlife Act Discussion Paper). The revisions would encourage the expansion of game ranching in order to raise big game animals for a variety of economic purposes.

Changes to the Wildlife Act influencing the direction of game ranching in the province will be through revisions to the Big Game Farm Regulation (6/71), which details the management of game ranching and domestic wildlife farming developments in Alberta.

3.3 BIG GAME FARM REGULATIONS (6/71)

The Big Game Farm Regulations (6/71) detail the rules regarding the development of various types of game farms. When the term "big game farm" is used as defined in the regulations, it means a farm where big game animals are kept "for the purpose of propagation or for sale, gain or profit."

There are a variety of big game farms defined in the regulations, ranging from a "commercial photography big game farm" where animals are kept in captivity strictly for the business of commercial photography, to a "restricted big game farm" which allows only for the captivity of white-tail and mule deer. The regulations outline identification and recording procedures for each animal, fencing requirements, the movement of big game animals to and from a big game farm and, penalties related to regulatory violations. The Big Game Regulations were established and are amended through Cabinet Order-in-Council.

It is important to note that the Big Game Farm Regulations fall under the Wildlife Act which is presently being reviewed by the Legislature. The Wildlife Act Discussion Paper states that there has been few provisions in the past for the legal traffic of game from big game farms, while game bird farms have existed to market birds for food. Provision for such new programs would be found in new regulations made under the Act as revised by Legislative changes in the future (Wildlife Act Discussion Paper).

While all the details of the proposed changes are not available, it is evident that the intent of the revisions to the Wildlife Act and, consequently, the Big Game Farm Regulations would be to update the

Wildlife Act to support statements in the new Fish and Wildlife Policy. The new Policy encourages an environment which fosters the development of a game ranching industry and a domestic wildlife industry in conjunction with existing domestic and wild ungulates in the province.

4.0 ECONOMIC OPPORTUNITIES RELATED TO GAME RANCHING

A variety of economic opportunities are potentially available through game ranching developments. While many of the economic opportunities associated with the development of game ranches would be relatively new to Alberta, a flourishing international trade presently exists in many of the products and services derived from existing game ranches in the world.

4.1 STRATEGIES AND OBJECTIVES

Existing game ranches that have developed on private lands and the Kikino Metis Settlement, have started with a variety of objectives, ranging from ensuring a continual supply of wild meat, to intensively managing animals and the environment in order to take advantage of all possible economic opportunities. Economic opportunities could potentially range from the export of animals as breeding stock, the marketing of velvet antler products and wild meat, and, possibly, the development of a game ranch as a recreational area.

Generally speaking, the more economic opportunities included in a game ranching development, the sooner the ranch recovers its initial costs and begins to make money. Initial economic modelling done at the University of Alberta has indicated that the break even point of a game ranch can range from 7 to 30 years, depending on the size of the operation, the variety of species and the number of economic objectives that are incorporated into the overall development strategy (Lutz).

Kikino, for an example, could be considered a relatively large scale game ranching operation pursuing a mixed game ranching model, with the intention of gradually incorporating further strategies into the overall operation.

Since 1979, Kikino has been expanding and developing their land base and increasing the number and variety of animals. Kikino's long range planning priorities are:

1. To build up the buffalo herd to the estimated maximum carrying capacity of the present ranch in anticipation of a yearly sale of two year old buffalo as a source of meat.

2. To expand the elk herd in order to begin exporting elk into national and international markets.

3. To manage the moose herd within the area as a source of meat for the Settlement.

Kikino is also starting to develop related strategies in order to obtain further economic gains from the ranch. The Settlement's Recreation Association has organized Buffalo Raffles in order to remove the older, less productive bulls from the herd. As well,members of the Wildlife Ranching Association are beginning to explore the feasibility of developing recreational opportunities in order to increase both short and long term revenues from the overall operation.

4.2 MIXED STRATEGY ECONOMIC OPPORTUNITIES

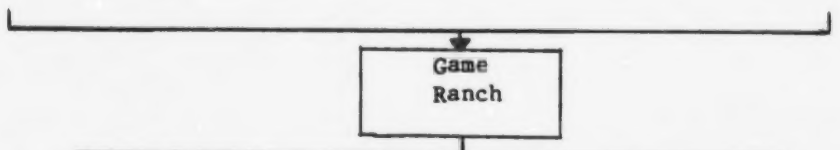
There are numerous direct and indirect economic opportunities that are part of a comprehensive game ranching operation. The following schematic displays a variety of economic inputs a game ranch would utilize and corresponding services and outputs that would be created.

Commercial Inputs

Abbatoir
Veterinary Services
Local Feed/Materials for Maintenance
Trucking

Government Inputs

Research
Animals
Expertise
Business/Management Training



Commercial Outputs

Meat - butchering
- packaging
- sales

Semen Export
Velvet Antler Production

Outdoor Opportunities
- hunting
- guiding
- photography
- trail rides

Employment/Economic Benefits

Employment - director
herdsmen
- short-term development projects

Sale of Products/Service
- meat
- hides
- outdoor activities
- crafts/clothing

Retention of Native Culture
Small Business Training
o develop management skills
o international exposure
o information bank and consulting skills for further developments

4.3 LEVEL OF MANAGEMENT VS ECONOMIC RETURN

One of the main arguments used to support the development of game ranching is that it represents an opportunity to increase the productivity of marginal land. Kikino cited this as an important consideration in the initial development of their game ranch. Alberta Agriculture is very supportive of any game ranching activity that has as a priority increasing the productivity of marginal land (Bunnage).

Various proponents of game ranching go further and argue that game ranching could be a successful economic activity on higher quality farmland as well. International examples of game ranching on quality farmland exist. In New Zealand, for example, deer have replaced sheep on intensively managed farmland. It is clear that a range of management choices exist, from establishing domestic animals on marginal land to increasing the management of the natural wild ungulates on a marginal or improved land base. One way of evaluating the various alternatives is to look at their relative economic potentials in relation to costs involved in realizing any returns. It is important to remember that such an evaluation does not incorporate intangible factors such as the retention of culture, etc., which are important considerations in evaluating potential game ranching endeavours by some native groups.

4.4 ANIMAL PRODUCTIVITY

A variety of research publications support the conclusion that existing wild ungulates are much more efficient than beef cattle in utilizing available forage on marginal land areas to produce leaner red meat.

Deer

Research undertaken in New Zealand has found that deer produce 40% more meat per acre than sheep or cattle in an intensively managed game ranching situation. For example, four domesticated deer can utilize the same pasture as one cow and achieve their commercial body weight in less than half the time as a wild counterpart (Masfer).

Elk

Research into the productivity of elk indicates that elk have a higher productivity ratio than cattle, and their meat contains only 30% of the fat found in beef and lamb.

Plains Bison

Plains Bison are classified as a domestic animal, and the most common animal used for meat production. In general terms, buffalo need less attention and produce a leaner meat than cattle. Although buffalo tend to be less predictable than cattle and have a higher mortality rate than cattle, they are considered to be as easy to raise with about the same risks.

4.5 HABITAT MANAGEMENT

The number of species of animals that a game ranch can accommodate is limited by the carrying capacity of the land; in that respect, game ranching faces similar habitat problems to those of a cattle rancher. Enough forage and browse must exist to support the animals throughout the year without overgrazing the area.

In order to maximize the return on a marginal piece of land, game ranching research has adopted a multiple species grazing strategy. This strategy operates on the theory that elk, buffalo and moose eat different plants.

Therefore, a number of different animals can exist in the same area without being in direct competition with each other's food supply.

Kikino has adopted a mixed species strategy with its wildlife ranch. It is Kikino's intention to build up the ranch's population of bison, elk and moose to the maximum carrying capacity of the land, without having to become involved in extensive habitat manipulation or supplementary feeding programs. The recent NADC grant to the Kikino Wildlife Ranch enabled the clearing of various meadow areas so that increased browse could be cultivated. It is Kikino's intention however to keep this kind of habitat manipulation to a minimum and allow the ranch to operate in as natural a state as possible.

Research related to game ranching is being carried out by the University of Alberta and other government departments. A proposed University of Alberta research project plans to use Kikino as a case study to determine the biological productivity of an area for game ranching, and also develop alternative production and management strategies (Bauer). At the university's Ministik Game Farm, ongoing research is examining the foraging requirements and energy expenditures of free ranging animals versus animals raised in a more controlled environment.

Research carried out at Elk Island National Park has established the basic biological requirements of various animals. Over a 70 year period at Elk Island the sustained live weight yield of the wild herbivores (an animal that feeds mainly on grass and other vegetation) exceeded 10 kg/ha with little habitat management. This compared favourably with research on the live weight yield of cattle grazed on similar terrain.

Other research has demonstrated that various plants being browsed could withstand utilization rates in the area of 60% - 75% without being adversely affected the next year.

The wide range of research being undertaken will assist individuals contemplating becoming involved in game ranching, to choose a particular management strategy that best suits their objectives (i.e. more animals and increased habitat manipulation, less animals and less habitat manipulation, more of a certain animal and corresponding habitat manipulation, no habitat manipulation beyond the natural carrying capacity of the land base, etc.).

4.6 EMPLOYMENT OPPORTUNITIES

Many employment opportunities generated through the development of a game ranch are similar to opportunities associated with cattle ranching. Developments at the Kikino Wildlife Ranch illustrate the sequence of employment opportunities involved in the development and maintenance of a large mixed species game ranch.

A large number of Kikino Settlers have been involved in various short term employment opportunities related to developing the game ranch. Once the basic game ranch is established both the animals and the property require ongoing maintenance work. Kikino presently employs two wardens (herdsmen) and a Director. The herdsmen monitor the animals, maintain the fence and recently became involved in a habitat management project. Two wardens are being trained for reasons of safety. The Director of the ranch allocates his time between developing long range plans, locating additional animals, publicity, developing and submitting funding proposals and, supervising the day to day operations.

The employment factor in developing a game farm or ranch is directly related to the type of management of the operation. If the operation is designed to be highly intensive, highly automated and utilize a number of the mixed strategies discussed earlier, then little employment will be generated. If a ranch is developed with cultural and economic objectives designed to operate in a more labour intensive fashion, increased employment opportunities can be built into the development strategy.

Added economic strategies such as the development of recreational opportunities, or the harvesting of velvet antler would generate additional employment. A game ranch project should be seen as a small business in employment terms requiring a fairly large initial capital investment.

4.7 GAME RANCHING - A NATIVE ECONOMIC DEVELOPMENT OPPORTUNITY

Discussions surrounding the further development of game ranching in Alberta have involved questions of Native involvement in the industry. What opportunities may exist for Native groups to become involved in game ranching and how will it affect their existing privileges and lifestyles?

Presently, Treaty Indians are entitled to unlimited hunting on any crown land in the Province on a year round basis. Metis individuals affiliated with a Settlement are entitled to unrestricted hunting on the Settlement.

Fish and Wildlife research estimates that Treaty Indians harvest about 6000 moose/elk annually. One interpretation of the Provincial game ranching initiative is that it will encourage Native people to lose interest in the larger crown land base on which they are entitled to hunt (Valerius Geist, Western Canada Outdoors). An opposing view is that any game ranching activity by Native individuals will be in addition to the unrestricted access to wildlife on crown land that they presently have. Very little information is available to accurately determine the significance of Native hunting in the Province and how any game ranching initiatives would change the existing situation.

Cultural and traditional factors involved in Native groups wishing to develop game ranches are important. Kikino is an example of a Native group developing a game ranch where their objectives include the desire to develop a facility to assist the community in retaining its heritage. At the official opening of the Kikino Wildlife Ranch, elders spoke of the

game ranch fulfilling a dream; that of seeing buffalo grazing on the settlement land once again (Lac La Biche Post).

Native involvement in the further expansion and development of a provincial game ranching industry is not considered to be a significant factor. It is anticipated that game ranches developed under the guidance of Native groups will have more flexible objectives and will not be managed as intensely for profit in comparison to the industry as a whole. It is important to remember, however, that Native groups have access to large areas of land which are ideal for the development of game ranches. For reason such as this, the general scenario put forward by University of Alberta researchers is that Native groups will develop game ranches on marginal lands solely for the purpose of developing breeding animals. Intensive game ranches will be developed on higher quality lands where animals would be raised and "finished" in conjunction with the packaging and marketing aspects of the industry.

As Kikino has demonstrated, the development of a game ranch offers a number of employment opportunities close to traditional lifestyles. Native groups in Alberta are currently involved in both the sale of hunting/outfitting excursions and the raising of big game animals for sale. If game ranching receives increased support it is expected that more Native communities would become further involved as a busines venture.

Initial public opinion surveys administered through University of Alberta research have indicated that the public is more comfortable with Native people being involved in game ranching than the white population. Initial survey work also suggests that generally, the public feels "warmer" towards Native game ranching than sport hunting. What this means in terms of long range acceptance or development of a game ranching industry remains to be seen.

4.8 RECREATIONAL OPPORTUNITIES

The development of recreational opportunities in conjunction with game ranching has been proposed as a way to supplement the economic return of a game ranch.

A game ranch developed around a small intensively managed land base may not be attractive in terms of recreational activities. A larger mixed species ranch such as Kikino, however, offers a variety of potential opportunities such as trail rides, animal viewing, overnight back packing trips and harvesting opportunities. Kikino is beginning to investigate the possibility of incorporating these types of opportunities into the overall management plan in order to increase short term revenues until the animal herds increase and a stable source of revenue through animal sales can be developed.

5.0 ECONOMIC POTENTIAL OF GAME RANCHED ANIMALS

What is the economic potential of a game ranch once the essential elements of development have been put in place? One way to calculate this potential is to assess the rough value of each of the animal species and any saleable products that could be obtained from them.

5.1 BUFFALO

Until March 1984, Plains Buffalo in Alberta were classified into two different categories, depending on their location. Plains Buffalo residing south of the 22nd baseline (the line of latitude crossing Alberta in a east-west direction just north of Peace River and south of Ft. McMurray) were classified as domestic animals which could be raised in a fashion similar to cattle. Plains Buffalo living in the area north of the 22 baseline were considered to be wild animals and were managed by Fish and Wildlife in a fashion similar to all other big game ungulates. Changes made to the Wildlife Act in March of 1984, designated all Plains Buffalo in the Province outside the national parks as domestic animals.

Meat

In Alberta buffalo meat is the only "game ranched" domestic meat that can be legally sold. It commands a price of 1.5 - 2 times higher than that of beef (Bunnage). Generally all game meat is valued at 1.5 the price of regular beef (Hudson).

The current price for buffalo in the commercial market place is approximately $1.60/lb ($3.52/kg) live weight (Bunnage). Therefore a 2000 lb (909 kg) buffalo would be worth approximately $3200.00 at the packing plant before it was butchered. Buffalo mature over five years and weigh approximately 1200 lbs(544 kg) per cow and 2000 lbs(908 kg) per bull respectively. Two or three year old animals are preferred for meat production, at which time they weigh approximately 900 lbs (409 kg).

The present demand for buffalo meat outweighs the supply. Restaurants in Calgary etc. which would like to feature buffalo on their menus have experienced problems obtaining a dependable supply. Supermarkets feature buffalo meat only when they can obtain a dependable supply. It is estimated that there are 100,000 head of buffalo in the United States and Canada. To put this in perspective, there are a total of 125,375,000 beef cattle in the U.S. and Canada. The present buffalo industry represents less than .1 percent of the total ranching industry.

Breeding Stock

Buffalo are in demand as breeding stock with more farmers and communities starting to develop buffalo herds. Native communities such as Kikino have started herds in the past by receiving animals from Elk Island National Park, which has a policy of providing surplus animals free of charge on a limited basis to Native communities. Buffalo are also available through provincial livestock auction markets and the Alberta Wildlife Park at an approximate cost of $1000 per buffalo calf. Many of the herds have been started under buy back arrangements whereby the livestock distributor contracts out buffalo to various farmers who agree to sell the calves back to the distributor.

Trophy Animals

Buffalo are hunted by some individuals as a trophy animal. The cape and head of a trophy bull are valued at approximately $600 to $800. Kikino has sponsored a buffalo hunt raffle where the winner of the raffle is entitled to harvest one buffalo, including the mounting of the head and dressing the meat. This package has been valued at $3500. The Recreation Society sponsoring the raffle could potentially realize a greater return through ticket sales. Assuming that the animal is a large bull weighing 2000 pounds (909 kg), the live weight of the buffalo at the slaughterhouse would equal approximately $3200.00 ($1.60/lb x 2000 lbs) or ($3.52/kg x

909 kg). Kikino's buffalo hunt raffle could be interpreted as a marketing strategy to gain income and draw attention to the ranch for future reference. Kikino will probably be able to obtain a higher price for the buffalo in the future when they are able to match the opportunity with the appropriate market demand.

To summarize, the value of an individual buffalo varies greatly, depending on its age, weight and the end use for which it is being purchased.

5.2 ELK

Canadian Wapiti (Elk) have developed an excellent reputation within international game ranching circles. In places such as New Zealand where game ranches operate on a fairly intensive scale, Canadian elk are in great demand.

Breeding Stock

The demand for Canadian elk as breeding stock is continuing at the international level. It is anticipated that the demand over the next few years will outstrip the supply. Very few "ranched" elk will be sold for meat because of their higher value as an export commodity. Only once the international market for elk is satisfied will a domestic meat industry begin to develop.

Kikino received 24 Elk through the provincial department of Fish and Wildlife in 1982. While Elk Island National Park supplied a number of elk as a starter herd, elk are not as plentiful as bison. According to Fish and Wildlife estimates, there are presently 15,000 elk in the Province. The Department's long range goal is to double the population to 30,000 animals. (Status of Fish and Wildlife Resources in Alberta, Working Paper, 1984, Energy and Natural Resources)

Alberta elk have been sold into the national and international markets as breeding stock for prices ranging between $3000 to $5000 per animal. They

are valued because of their size and corresponding high yields of meat and velvet antler. In New Zealand elk are cross bred to produce animals suitable for intensive game ranching.

The growing international market for elk is very real. A Toronto based agricultural import/export company has submitted a proposal to the federal government outlining a suggested marketing strategy for elk in Canada. Canadian elk are sought by New Zealand ranchers, where only 1% of their herd presently consists of Canadian elk, leaving room for further exports. In 1981 New Zealand had 100,000 game ranched animals (deer and elk). It is estimated that this total will expand to 500,000 animals within 5 to 10 years, with an increasing portion of elk being imported from Canada.

Meat

No price has been established for elk meat in Alberta because it is illegal to sell such a product. Using the experience of other countries such as New Zealand, Australia and China, the meat of deer and elk is packaged and sold into specialty markets where it commands a price 1.5 to 2 times the cost of regular beef.

Proposed changes to the Wildlife Act and Big Game Farm regulations are intended to create incentives in order to further develop game ranches for the purpose of animal export and meat production. Marketing alternatives in conjunction with the development of a commercial elk industry are presently being investigated. A system of raising and marketing big game animals that would discourage existing and possible future illegal trafficking in big game animals would be an essential component of any elk marketing proposal.

Velvet Antler

Velvet antler refers to the soft new antlers that grow on various male ungulates every year. The harvesting of velvet antler has occurred for over 2000 years, from Alaska to New Zealand. The development of a velvet antler industry can be an important economic aspect of any game ranching operation involving elk and deer.

The process of harvesting the antlers involves rounding up the animals in late June, administering a local anesthetic and removing the antlers. The antlers are then hung upside down until the blood coagulates and the antler hardens. It is then frozen and/or pulverized and packaged for export.

Korea is the main consumer of velvet antler, importing close to 80% of the world's production. The present world trade in velvet antler is estimated at 100 metric tonnes/year. Each importing country has slightly different preferences with Korea's preference being velvet antler from Wapiti.

One elk can produce up to 9 kilograms of velvet antler which in turn sells for anywhere between $100 to $150/kg at the source of removal, and eventually retails in Korea for about $1800/kg (U.S.). Four grades of velvet antler exist, with prices corresponding to the quality. The average Korean family spends approximately $30/month to purchase one ounce of velvet antler.

Velvet antler is used for a number of medicinal purposes including the treatment of heart disorders, anemia and is claimed by some to be an aphrodisiac. Velvet antler is known to dilate the blood vessels and stimulate the production of red blood cells.

On the production end of the velvet antler industry are the game ranches, such as Kikino, that have the potential to develop velvet antler. The removal of antlers from live animals is presently illegal in Alberta, but

changes to the Wildlife Act may encourage the development of a velvet antler industry in the Province in conjunction with game ranching. It has been suggested that Canadian markets for velvet antler should be exploited first, rather than exporting all of the product. Velvet antler is presently produced nationally and internationally, using in part elk which have been exported from Alberta.

Game ranches in Alberta are beginning to research and plan for a velvet antler industry in anticipation of legislative changes. If a velvet antler industry became part of a mixed species game ranching strategy, ranches that operate at a less intensive level of management would have to resolve the dilemna between maintaining their existing level of management and the need for more stringent management in order to protect and harvest the velvet antler in its prime state. More fencing and facilities would be needed along with increased attention and separation of animals to ensure that the velvet antler is not ruined close to the time of harvest. Realizing that a male elk is capable of producing between $900 to $1300 worth of antler continually for up to 8 years, any ranch becoming involved in velvet antler production would have to decide whether increased costs etc., justified the effort.

Semen Export

The export of elk semen is another product of game ranching in Alberta. Canadian Wapiti semen is exported in the same way the cattle industry imports and exports bull semen for artifical insemination into cows. Elk semen is used to artificially inseminate other elk and deer in order to increase and develop herds.

Hides

Elk hides can be tanned and used for a variety of leather products.

Summary

Elk will continue to be very valuable animal in any game ranching developments. The products from elk command high prices in world markets. Canadian elk are in demand and bring a premium price. The first priority for any elk game ranched is to develop a herd for exporting. Meat production remains a secondary and long-term strategy.

5.3 MOOSE

Moose receive a lower priority than buffalo and elk in most game ranching strategies. Kikino for example, lists the development of a moose herd for local meat consumption as its third priority. While there is less literature on the management of moose for commercial purposes, moose are an important part of various game ranching developments.

The domestication of moose is practiced in the Soviet Union, where moose are utilized for meat, milk and as a draft farm animal. Behaviour modification experiments have assisted in turning the moose from a solitary browser into a herding animal similar to elk. The Soviets consider a domestic moose to be more beneficial than wild moose because castration increases its weight. As well no loss of meat occurs through wounding when the animal is killed for consumption as happens in hunting.

Research carried out in northern Manitoba has indicated that a population of domestic moose numbering in excess of 200 animals at a density of 10 to 12 animals per square mile could constitute an economically viable operation, assuming the operation would include habitat development and range management.

The Kikino Wildlife Ranch contains 6 moose, the majority which were trapped when the fence was built. The University of Alberta's game farm also contains a number of moose which are involved in experimental research.

No price has been established for moose meat in Alberta because it is illegal to sell within the Province.

5.4 MARKETING STRATEGIES

One objective in developing game ranches and game farms is to produce meat for sale and consumption. No system presently exists to handle the sale of big game meat from animals that are defined as wild under the Wildlife Act. This distinction between wild animals and buffalo can be illustrated again at this point by pointing out that Plains Buffalo meat can now be sold anywhere in Alberta in a fashion similar to beef, while it remains illegal to sell meat in Alberta from animals designated as wildlife under the Wildlife Act, such as the Wood Bison.

Proposals put forward in discussions regarding the marketing of meat produced by game ranches include the development of a wild meat industry in Alberta through the use of a central registry.

A marketing system for game ranched animals would need to develop a method to register all animals on provincial game ranches. Kikino, for example, would be required to register animals bought, captured by permit, or born on the ranch. The registration number would be included whenever that animal or any part of it was utilized, bought or sold in conjunction with any game ranching activity.

Slaughtering regulations and unique packaging for the marketing of big game ranch meat would have to be developed in order to eliminate the possibility of illegal (wild) animal products being laundered through the legal game ranching industry. One concept being discussed is to develop a mobile packing plant, complete with health inspectors, that would make regular visits to all game ranches. Any product not accounted for by a registration number and unique packaging would be confiscated and the producer prosecuted.

A game ranch would round up the animals it wished to harvest, or if velvet antler was being taken, the animals that were to have their antlers removed. The required inspections would occur prior to the harvesting. Each product from the animal such as meat, semen, velvet antler etc. would be recorded alongside the correct registration number. Each party involved would be issued appropriate receipts to keep track of individual animal's production. The meat would then be taken to a central packaging plant where it would be dressed and packaged for sale as an Alberta product.

Summary

International research and economic analysis indicates that various methods of game ranching can be profitable economic undertakings. This experience, together with increasing provincial expertise could be drawn upon for any further development of a provincial industry.

6.0 CONCERNS AND ISSUES

With a game ranching industry beginning to develop in Alberta and legislative changes being proposed that would encourage and quicken the pace of that development, the biggest unknown in the whole initiative is how game ranching will be received by the general public. Opinions on the topic have been expressed by various interest groups, ranging from total support for game ranching to stated opposition. What is not clear, however, is the general public sentiment towards establishing game ranching on a larger scale. This gap regarding public opinion on the issue could be a significant factor in the future growth of the industry. The general public sentiment on matters of wildlife, captivity and the killing of animals can be very volatile, as has been witnessed by support for anti-trapping and anti-hunting lobbies. It appears nobody has a clear reading or understanding on how the public reacts to such proposals.

It is important to examine the various arguments that have been put forward by critics and supporters of game ranching in Alberta. The airing of different opinions is necessary to stimulate debate and assist government and operators to obtain a clearer picture of what the publics' standards are regarding acceptable game ranching developments in Alberta.

6.1 PUBLIC PERCEPTION OF BIG GAME ANIMALS AND GAME RANCHING

Individuals and groups have different concepts of what constitutes wildlife. Our society offers individuals the opportunity to view animals in a variety of environments. Legislation, news media, lobby groups and other aspects of society all influence our perceptions. Together with experiences from their own environment, people develop opinions regarding various animals, their value in our society and acceptable standards of management for individual species. This process is beginning as game ranching starts to develop in Alberta.

The Kikino Wildlife Ranch offers an example of the different ways in which people perceive wildlife. As discussed earlier under Recreational Opportunities, the Kikino Settlement game ranch is called a Wildlife Ranch. The ranch contains bison, elk, moose, and deer. While Plains bison are not considered wildlife under the of the Wildlife Act, many people perceive them as wildlife. This concept is reinforced by the Ranch's name and letterhead, etc. When it comes time to harvest some of the older bulls and a "hunt" is proposed various public groups express concern that animals they perceive to be wildlife can be killed legally like domestic livestock. This example illustrates that the general public appear to not be adequately aware of amendments made to the Wildlife Act that have changed the status of certain big game animals and, as well, proposed changes being discussed that would alter how animals presently defined as wildlife would be utilized.

The general public has not been directly approached on these issues, nor have they offered any real opinion. They may, however, have an opinion that could be displayed suddenly in a backlash against game ranching because of a previous lack of information or misinformation.

Alberta Agriculture and Fish and Wildlife both acknowledge the potential problems associated with the public's perceptions of game ranching. Alberta Agriculture is concerned that domestic buffalo are humanely killed. Fish and Wildlife acknowledge that adverse public opinion against game ranching could halt the development of the industry.

6.2 HUNTING CONCERNS AND GAME RANCHING DEVELOPMENTS

The most active public group making its position known regarding further development of game ranching in Albera is the Provincial Fish and Game Association. The Association has a paid membership of approximately 24,000 members, but represents the sentiments of many more of the approximately 165,573 Wildlife Certificate holders purchased in 1982-83 (approximately 11% of Albertans over 15 years of age hunt).

At the Association's annual meeting in 1983, members approved a motion giving conditional support to further game ranching developments in the Province. At the 1984 annual meeting however, the motion of support for game ranching was withdrawn over objections to a number of the proposed revisions to the Wildlife Act. Specifically, the Association is concerned with the following changes:

1. The granting of private ownership to various existing provincial wildlife stocks (Big game animals for game ranches).

2. The use of public lands to expand game ranching enterprises.

3. Concern that game ranches could become shooting preserves and that there will be public revulsion against all hunting as a result.

4. That game ranching will eventually devalue the public perception of our big game animals to domestic stock such as the Bison (minutes of the 1984 F/G Association Annual Meeting, Page 11).

Approximately 14.5% of all Alberta hunters belong to the Fish and Game Association. However, the economic spin offs of the overall hunting industry in Alberta are substantial. It is estimated that on the average each licensed hunter spends $1,000 annually on hunting gear. In terms of moose and elk hunting, 60,000 moose hunters spent 330,000 recreational days hunting moose (1980). Elk hunters spend 132,000 recreation days harvesting 2000 elk. On average, daily spending for each hunting participant (1981) was $71/day. Therefore, moose and elk hunters spend a total of 462,000 recreation days and $32,802,000 dollars annually (Fish and Wildlife Division).

The Association has drafted an alternative set of Game Ranching Regulations that outline how the Association would proceed with the development of various game ranching activities in the Province. The

draft regulations, when compared with the present provincial big game farm regulations, highlight the concerns of the Association. (See Appendix C, Comparison of Draft Fish and Game - Game Ranching Regulations and the Provincial Big Game Farm Regulations 6/71)

The concerns of the Fish and Game Association and the individuals that it represents zero in on the debate that has been started by proposals to expand game ranching in the Province. Does support for, and the development of, a game ranching industry in Alberta represent a "dangerous distraction on the way to better wildlife management" or "a fundamental change in the ownership of wildlife and the public access to it"? (Valerius Geist, Western Canada Outdoors, Sept/Oct 1983). The concerns regarding the short and long term implications of increased game ranching are important and need to be carefully examined in order to obtain a clearer picture of what game ranching can offer northern Alberta.

6.3 WILDLIFE AS A PUBLIC RESOURCE

Under Section 13 of the Wildlife Act, wildlife is a public resource owned by the Crown. If an individual owns land on which wildlife exists he/she must respect the laws regarding the management of that wildlife. Section 23 states that one cannot "sell, trade or barter or offer for sale access to any lands for the purpose of hunting ... any big game animals". The owner of private land on which wildlife is resident cannot derive direct or indirect monetary return from that wildlife. A land owner does, however, have the right to allow or prohibit hunting and trapping on their land. According to studies approximately 17% - 30% of private landowners "post" their land and do not allow hunting.

One of the Fish and Game Association's concerns is that proposed changes to the Wildlife Act and Big Game Farm Regulations will change the fairly stable relationship between private landowners and hunters. Presently anyone wishing to develop a big game farm must have a minimum of 160 acres fenced to regulation standards. An applicant for restricted big

game farm or commercial photography big game farm needs a minimum area of 20 acres fenced. If changes to the Act decrease or eliminate the minimum land and fencing standards that now exist, this will allow private operators with smaller land bases the opportunity to develop game ranches.

Private landowners may see an opportunity for increased economic returns through game ranching, and move towards developing their land into game ranches or farms. If game farming became popular this might result in previously accessible private land being lost to the hunting public (Valerius Geist, Western Canada Outdoors). Under existing legislation, a game ranch operator would not be able to charge for the hunting of wildlife on his land, but he could purchase big game animals through another ranch or by permit from Fish and Wildlife which he could then raise and sell. Over a period of time, the 70% of private land that is presently available to hunters may be diminished.

Fish and Game spokespersons have pointed out that certain Alberta ranchers have for years charged a fee to reserve areas of public land (grazing leases) for certain hunters, and the Crown has been relatively powerless to deal with them under existing legislation. The Association's concern is that proposed revisions to the Wildlife Act would lend further legitimacy to individuals who want virtual rights over the ownership of crown land and wildlife resources (Scammell, Western Canada Outdoors, July/Aug 1984).

Game ranching is perceived as one example of a management alternative that would, to a limited extent, allow public animals to become a private resource, while continuing to develop and manage other wildlife as a public resource.

It is also apparent that a key concern regarding the development of a game ranching industry is the land base upon which any development occurs; private or public lands, marginal or Class One land, leased land or Metis

Settlements etc. Presently, wildlife exists on both private and public land as a public resource.

It is important to address the issue regarding the land bases that game ranching developments will be encouraged to develop on. Different levels of support may exist for game ranching initiatives depending on what land base is proposed.

6.4 HARVESTING OF ANIMALS

Part of the controversy associated with game ranching is opposition to the basic concept, while other concerns are due in part to a lack of information on the subject and activities relating to game ranching.

The legislative definition of game ranching is distorted by a number of existing "wildlife" ranches that are perceived to contain wildlife exclusively, but in reality contain both wild and domestic animals. Kikino is described as a Wildlife Ranch yet also contains Plains Buffalo which have been removed from the Wildlife Act and are considered to be a domestic animal, no different than a cow or horse. When it comes time to harvest animals from the herds of Plains Buffalo or elk, two different sets of rules apply to the domestic and wild animals respectively.

A Plains Buffalo can be killed in any humane manner. Like cattle, they can be legally shot in the field or taken to a slaughter house and butchered. Although many people still perceive Plains Buffalo to be a wild animal in Alberta, no " wild " buffalo exist outside the national parks. As previously stated, a cabinet order exempted Plains Bison from protection under the Wildlife Act, eliminating any distinction in the northern half of the Province. Many people in the general public are not aware of this change and continue to perceive Plains Buffalo as a wild animal.

Critics of game ranching contend that further game ranching will lead to the shooting of animals "like fish in a barrel", which will be demeaning to both the animal and our existing sports heritage. It is suggested that this will increase public revulsion against all hunting and assist antihunting lobbies who argue that hunters already have a monopoly on wildlife that belongs to all of the public.

First hand experience regarding possible public backlash to game ranching was experienced by Kikino to a limited extent when they first considered their buffalo hunt. Kikino was looking for a way to sell off a number of old bulls that were not needed. The hunt concept for the bulls was developed because of their trophy size, even though they are legally a domestic animal. While Kikino considered the "hunt" to be essentially a "sale" of the animals, public reaction to a perceived slaughter of a "wild" animal was mixed. Even when the facts are presented and misperceptions clarified, public opinion against the hunting of captive big game remains volatile and ranges from intolerance for certain animals to extreme protectiveness for others. Research prepared by Fish and Wildlife reports that 86.9% of Albertans feel "fish and wildlife have an inherent right to exist in and of themselves", and that maintaining abundant wildlife is very important to them.

An alternative view offered is that if legislation was developed that allowed for the hunting of big game animals on game ranches, it could offer an opportunity to put an element of "sport" back into sport hunting, by regulating the way an animal could be hunted and killed. Fish & Wildlife statistics show that most big game animals are shot within 1.8 km of a road, indicating hunters are not having to venture far from their vehicles. If a game ranch allowed only bow hunting on foot for example, hunting on game ranches might be perceived as a more equitable contest.

6.5 GUIDING/OUTFITTING INDUSTRY

Potential conflicts between the existing guiding and outfitting industry in the Province and increasing game ranch activities need to be examined.

One of the objectives of any hunter is to obtain meat. Presently the 50 licensed outfitters and 1000 licensed guides in Alberta don't have to compete with ranches that could legally offer elk or moose meat for sale, or the opportunity for a "sale" of a buffalo through a hunt raffle, as Kikino is offering. If the objective of obtaining "wild" meat can be satisfied in the future at the supermarket through an elk or moose meat industry, it is possible that outfitters may lose clientele. If a "trophy" animal can be purchased without hunting it or "hunted" through an organized opportunity such as Kikino (buffalo) where the animal is legally a domestic species and the success rate is 100%, hunter attitudes and preferences may change. How important is the recreational factor in sport hunting? No one has a clear picture of how game ranching might change the present system of hunting and guiding in Alberta. What is known is that the licensed guides and outfitters in Alberta serve approximately 4000 non-resident hunters who generate about $4.4 million annually (Fish and Wildlife Division).

7.0 SUMMARY AND RECOMMENDATIONS

The issues surrounding the development of a game ranching industry in Alberta are complex. Many different opinions and viewpoints exist regarding how game ranching and wildlife farming industries should develop, and who should be involved. Unanswered questions seem to focus on what long-term effects game ranching will have on the future management of our public and private lands and resources.

There are concerns that game ranching will lead to a net decrease in the wilderness and environmental values that presently exist in our society. Critics suggest that game ranching is not compatible with the need to protect various animal species and upsets the existing balances of nature. There are concerns that the development of a game ranching industry will cause a significant increase in the poaching and illegal sale of big game animals. Critics suggest that illegal products of big game animals from the wild will be laundered through the formal marketing system established to market the products of the animals from the licensed game ranches.

Supporters of game ranching contend that the economic motives for dealing illegally in wildlife already exist and will continue to exist regardless of whether commercial game ranching establishes itself. It is further suggested that legal supply of wildlife products would stabilize or reduce the incentives to deal in illegal products and that well designed legislation could avoid many potential problems caused by poaching and illegal sales (Hudson).

The cost relating to the development and administration of provincial game ranching industry remain incomplete. Various government departments (Alberta Agriculture, Fish and Wildlife, Environment, Northern Development and Native Secretariat) have budgeted or allocated staff time or grant dollars to research various aspects of the potential industry. There are on-going discussions regarding costs etc., through trade publications and

university research. While cost estimates are available on the development of individual farms, little information is available relating to the administration and enforcement costs of a larger provincial industry.

In 1978 the Northern Alberta Development Council commissioned research to explore the potential for developing game ranches in northern Alberta. At that time game ranching discussions were in their early stages.

In the context of the increased interest in game ranching as an economic development opportunity for northern Albertans, the Northern Alberta Development Council has examined on-going game ranching activities in northern Alberta and developed the following recommendations.

RECOMMENDATION I

The Northern Alberta Development Council supports the general concept of game ranching in northern Alberta and recommends that conditional support be given to the development of the industry as outlined in the new Fish and Wildlife Policy.

The provincial Fish and Wildlife Policy, the Wildlife Act and the Big Game Farm regulations represent the policy and legislation directing game ranching developments in Alberta. These policies and statutes need to receive wider circulation in order that a greater number of Albertans participate more fully in the discussion involving further development of game ranching.

RECOMMENDATION II

The Northern Alberta Development Council recommends that the Fish and Wildlife Division of the Department of Energy and Natural Resources increase the information on game ranching available to the public and solicit additional input into the review and development of further game ranching legislation in Alberta.

The Fish and Wildlife policy supports two concepts, one described as game ranching and the other as domestic wildlife farming. While the terms "big game farm" and "farm" are defined in Alberta's Big Game Farm Regulation 6/71, no clear definitions exist regarding domestic wildlife farming or game ranching.

RECOMMENDATION III

The Northern Alberta Development Council recommends that definitions be developed in Alberta's Regulations which clearly outline the concepts of " game ranching " and "domestic wildlife farming" as stated in the Fish and Wildlife policy.

There appears to be a lack of awareness on the part of the general public regarding the legal status of various big game animals involved in discussions pertaining to game ranching. An example of this is the recent amendment to the Wildlife Act which changed the status of Plains bison in northern Alberta, from a wild animal to a domestic animal.

RECOMMENDATION IV

The Northern Alberta Development Council recommends that the Fish and Wildlife Division of Energy and Natural Resources provide adequate notification regarding changes made to the classification of big game animals as they are brought under or removed from the Wildlife Act in

order that the public are aware of and understand to a greater degree the distinctions between domestic big game animals and big game animals designated as wild under the Wildlife Act, in conjunction with the development of game ranching and domestic wildlife farming.

As the report discusses, various groups have different objectives when deciding to become involved in game ranching opportunities. It is important that any governing legislation is flexible enough in its format to ensure that game ranches are able to develop with varying economic and cultural objectives.

RECOMMENDATION V

The Northern Alberta Development Council recommends that regulations intended to further the development of provincial game ranching or domestic wildlife farming be flexible to ensure that game ranches with varying objectives and management styles will be able to develop.

While game ranching and domestic wildlife farming offer a variety of economic opportunities in conjunction with various strategies and objectives, the two key components are the animals involved and the land base utilized. Further development of provincial game ranching and domestic wildlife farming industries should focus on resolving issues and concerns related to these two key components.

RECOMMENDATION VI

The Northern Alberta Development Council recommends that further development of game ranching, domestic wildlife farming and related economic opportunties be subject to:

i) Further discussions occurring regarding the types of big game that are or could potentially be involved, their legal classification as wild or domestic animals, the conditions of their captivity and the sale of the animals and their by-products.

ii) Separate assessments being undertaken regarding the development of game ranching on private lands and on Metis Settlements, in order to recognize and respect the different cultural and economic situations under which development could occur.

It appears that the debate over game ranching has been blurred in part by a lack of understanding regarding provincial departmental jurisdictions and responsibilities in conjunction with game ranching and domestic wildlife farming initiatives. Both Alberta Agriculture and Fish and Wildlife have responsibilities related to their development. It would be beneficial if the involvement of each department could be more clearly defined.

RECOMMENDATION VII

While recognizing that issues of jurisdiction and responsibility are subject to the legal classification of the big game ungulates under the Wildlife Act, the Northern Alberta Development Council recommends that Energy and Natural Resources and Alberta Agriculture resolve issues of jurisdiction and responsibility regarding domestic animals and wildlife involved in game ranching and domestic wildlife farming initiatives, in order that the industry develops in a coordinated manner.

There is a need to pace any development of a provincial game ranching industry at a speed that allows for adequate public input into the process and the resolution of related concerns. There appears to be no clear understanding of public wants or needs regarding the management of Alberta's wildlife resources in terms of game ranching and wildlife farming developments.

The provincial government is actively involved in developing wildlife management programs in conjunction with various economic opportunities. A crucial element in achieving success in any particular initiative is public support. As wildlife habitat and populations change, and the demands on public resources increase, new management programs are needed.

The proposed game ranching and domestic wildlife farming initiatives represent examples of new management techniques being proposed in conjunction with a renewed provincial government emphasis on wildlife habitat development. The Northern Alberta Development Council strongly supports efforts that ensure public awareness, in order that they can comment on any further role game ranching and/or domestic wildlife farming can play in the economic and social development of northern Alberta.

APPENDIX A

CHRONOLOGICAL BACKGROUND TO RESEARCH REPORT

1975 - 1978 Northern Alberta Development Council receives a number of briefs discussing game ranching as a potential economic development opportunity to be investigated.

1978 NADC commissions a study to determine the feasibility of game ranching in northern Alberta:

Reports: a) Game Ranching Section One
A Review of the Concept and Feasibility

b) Game Ranching Section Two
i) Economic Feasibility Analysis of Developing a Game Ranch on the Paddle Prairie Metis Settlement.

ii) Economic Feasibility Analysis of Developing a Game Ranch on the Kikino-Caslan Metis Settlement.

(Richmond Livestock and Management Consultants, 1978.)

The studies examine many general concepts regarding game ranching and assess the potential for game ranches on the Paddle Prairie and Kikino-Caslan Metis Settlements.

1979 Kikino Metis Settlement began the development of a game ranch.

1982 Big Game Farm Regulations amended to establish the legality of issuing Big Game Farm Licenses to Metis Settlements.

1982	Tabling of new Fish and Wildlife policy lending support to the development of a domestic wildlife farming industry and a game ranching industry on private land and Metis Settlements in Alberta.
1983	Discussion Paper on Proposed Revisions to the Wildlife Act issued by Fish and Wildlife.
March/1984	A response to the discussion paper prepared by Northern Alberta Development Council and sent to Hon. D. Sparrow, Associate Minister for Public Lands and Wildlife.
July/1984	Background paper on game ranching issues prepared for presentation to the Northern Alberta Development Council.

A P P E N D I X B

Comparison of Draft Fish and Game Game Ranching Regulations and Provincial Big Game Farm Regulation.

Section 3.4

The Association proposes a game ranch license fee of $5,000.00, with a yearly renewal fee of $2,500.00.

Presently the Regulations charge $100.00 for a new license and $50.00 for each renewal.

Section 4

The Association proposes that when a game farm is started all animals native to the area would have to be removed or purchased by the farm owner for a fee equivalent to the average commercial value of the animal.

Present regulations require the owner to file a return with the Department indicating numbers and type of wildlife existing within the newly fenced area but does not require that a licensee purchase the stock.

Section 5

The Association's draft regulations call for a seven foot fence. While present regulations outline specific fencing requirements for various types of game ranches, indications are that proposed amendments to the regulations will loosen up the present minimum fencing requirements.

Section 10

The Fish and Game Association regulations state that no animals shall be captured from the wild for use on a Commercial Game Farm.

Present regulations allow for the department of Fish and Wildlife to issue collection permits to the big game farm license holders for a nominal fee. Each permit allows for collection of six animals of a particular species/year.

Section 10.3 The draft Fish and Game Association Regulations state that no publicly owned Crown land shall be sold or leased for the purpose of Commercial Big Game Farming.

The new Fish and Wildlife Policy supports the development of game farming on Metis Settlements.

Section 13.2.1 The draft Fish and Game Association Regulations state that the removal of antlers be done by a licensed veterinarian. The provincial Big Game Farm regulations do not presently address this issue.

These points represent the main concerns expressed by the Fish and Game Association regarding the development of game ranching in Alberta. It is clear that at the present time most of the legislation "encouraging an environment which will foster the development of a game ranching industry" in Alberta is under review. Many of the concerns expressed by groups and individuals may be addressed in the revised legislation.

APPENDIX C

Game Ranching Research Contacts

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References

1. Alberta Regulation 6/71. Big Game Farm Regulations, Government of the Province of Alberta, Queen's Printer, Edmonton.

2. Anderson, Ronald. Gold on Four Feet Commercial Deer Farming: A New Rural Industry of Outstanding Potential, Ronald Anderson and Associates, Australia, 1978.

3. Bauer, L. Hudson. Bioeconomic Analysis of Game Ranching Potential on Native Lands in Alberta, (Research Proposal) Department of Rural Economy and Animal Science, University of Alberta, Edmonton, March 1984.

4. "Game Animals and Agriculture", Journal of Animal Science, Volume 40, Number 5, 1975.

5. Conrad, Lutz. "Game Ranching Strategies for Bison, Moose, Elk and Deer" Undergraduate Research, Department of Animal Science, University of Alberta, Edmonton, 1981.

6. Energy and Natural Resources, Fish & Wildlife Division. Fish and Wildlife Policy for Alberta, 1982 Proposed Revision of the Wildlife Act:Discussion Paper, November, 1983.

7. Energy and Natural Resources, Fish and Wildlife Division. Status of the Fish and Wildlife Resources in Alberta, Working Paper, 1984, Edmonton.

8. Kikino Wildlife Ranching Association. "Five Year Plan" Kikino, Alberta, 1984. (letter)

9. Geist, V. "Some Problems Within Game Ranching", Western Canada Outdoors, McIntosh Publishing Co. Ltd., North Battleford, Saskatchewan September - October, 1983.

10. Fullerton, Lyle. "Big Game Ranching", Western Canada Outdoors, Volume 6, Number 6, 1982.

11. Masfen, Archie. "The Economics of Deer Farming" New Zealand Journal of Agriculture, June, 1979.

12. Massman, Archie "International Game Ranching Programs" Journal of Animal Science, Volume 40, Number 5, 1975.

13. Payne, Harvey. Moose Ranching, Department of Natural Resources and Transportation Services, Manitoba. (nodate).

14. Reindeer Herders Newsletter, Volume 1, Number 3, 1981. Institute of Arctic Biology, University Of Alaska.

15. Richmond Livestock and Management Consulting Ltd. Game Ranching - Section I: A Review of Concept and Feasibility Game Ranching - Section II: Economic Feasibility Analysis of Developing a Game Ranch on the Kikino-Caslan Metis Settlement prepared for Northern Alberta Development Council, September, 1978.

16. Telfer, Edmond. "Potential for Game Ranching in Boreal Aspen Forests of Western Canada", Journal of Range Management 28 (3), May 1975.

17. Wildlife Act, Government of the Province of Alberta, Queen's Printer, Edmonton.